

Amendments to the Claims

Claim 1-11 (canceled)

Claim 12 (currently amended): A bee monitoring system for monitoring bee colonies in a hive comprising:

a microprocessor;

at least two input transducers, The monitoring system of claim 1, wherein one of said at least two input transducers is a bee counter comprising; at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a debounce circuit; a microprocessor; and a multiplexer; and

at least two output signals.

Claim 13 (original): The monitoring system of claim 12, wherein said hive has a plurality of doors and said counter has a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.

Claim 14 (previously presented): The monitoring system of claim 12, wherein said microprocessor comprises a single board, at least eight input transducers, at least eight output signals, at least one serial port, said microprocessor running at least at 10 megahertz, and comprising at least 64 kilobytes of random access memory.

Claim 15 (previously presented): The monitoring system of claim 12, wherein bees are counted as a bee passes said emitter and two detectors of said at least one set of an emitter and two detectors creating a state comprising a sequence of bits in a stack; said microprocessor comprising programming comprising the steps of;

comparing a current state to a previous state; and based on that comparison determining;

if said bee passed from the outside of said hive to the inside of said hive, then recording an "in" count;

if said bee passed from the inside of said hive to the outside of said hive, then recording an "out" count; and

if said bee did not pass said emitter and two detectors, then resetting the state.

Claim 16 (original): A bee counter for a hive comprising:

at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit and a debounce circuit;

a microprocessor; and

a multiplexer.

Claim 17 (original): The bee counter of claim 16, wherein said hive has a plurality of doors and said counter has a plurality of sets of emitters and detectors and said counter is capable of counting bees in a single door of the hive.

Claim 18 (previously presented): The bee counter of claim 16, wherein said microprocessor comprises a single board, at least eight input transducers, at least eight output signals, at least one serial port, said microprocessor running at least at 10 megahertz, and comprising at least 64 kilobytes of random access memory.

Claim 19 (previously presented): The bee counter of claim 16, wherein bees are counted as a bee passes said emitter and two detectors of said at least one set of an emitter and two detectors creating a state comprising a sequence of bits in a stack; said microprocessor comprising programming comprising the steps of;

comparing a current state to a previous state; and based on that comparison determining;

if said bee passed from the outside of said hive to the inside of said hive, then recording an "in" count;

if said bee passed from the inside of said hive to the outside of said hive, then recording an "out" count; and

if said bee did not pass said emitter and two detectors, then resetting the state.

Claim 20 (original): A bee monitoring system for monitoring bee colonies in a hive comprising:

a microprocessor;

at least eight input transducers selected from the group consisting of a temperature sensor, a scale, a humidity sensor, and a global positioning system;

a counter comprising at least one set of an emitter and two detectors, the set comprising an amplifier, a hysteresis circuit, and a de-bounce circuit; a microprocessor; and a multiplexer, wherein the hive comprises a plurality of doors and the counter comprises a plurality of emitters and a plurality of detectors and the counter is capable of counting bees in a single door of the hive; and

at least two output signals, wherein the output signals are transmitted by a method selected from the group consisting of telephone line, radio, and satellite and wherein the output signals are capable of controlling remote devices.